Exhibit 5

Case 4:14-cv-01853-HSG Document 67-19 Filed 07/29/15 Page 1 of 104

Pages 1 - 104

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

BEFORE THE HONORABLE HAYWOOD S. GILLIAM, JUDGE

CYWEE GROUP LTD.,
Plaintiff,
VS.
APPLE INC.,
Defendant.

No. C 14-1853 HSG

San Francisco, California
Wednesday, July 22, 2015,

TRANSCRIPT OF PROCEEDINGS

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Reported By: Katherine Powell Sullivan, CSR No. 5812, RMR, CRR
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and yaw angles, but these yaw, pitch, and roll angles can be used to calculate specific angles.

So take, for example, this plane. If the plane decides to take a hard right, it's rotating along that perpendicular axes. That's a yaw angle. And so when you're facing one way and then it deviates and changes, it creates an angle. You can measure that one angle.

Likewise, there is a lateral axes. This is like if the plane was on the ground and decides to take off. It creates a new angle. And this is also the pitch angle.

And third is the longitudinal axes, where the plane can potentially roll. So this is if you were in one direction and decide to tilt and turn, that's the roll.

Now, this is important because each individual sensor can potentially calculate these rotation angles. Each individual sensor can utilize those angles to find orientation. So an accelerometer on its own could find orientation. Or a gyroscope could find orientation.

Let me give you another example. For example, if the gyroscope were to be utilized by itself, this is like a plane that is rotating about these axes. As it's moving, you can see the deviation of these angles. Once there's a difference in these angles, you can take those rotation angles and calculate orientation from those.

And the purpose I wanted to discuss about those -- those

sensors is because each of those individual sensors and the ability to calculate the orientation, they have their own limitations. Each motion sensor, like the accelerometer by itself, has its own errors; the gyroscope has its own errors; and the magnetometer has its own errors.

And I would actually like to refer to Dr. Ahamed to describe some of these limitations of the accelerometer.

And, Dr. Ahamed, can you actually explain to the Court why there are elements of noise with an accelerometer, and how a high frequency causes the accelerometer to have some errors?

DR. AHAMED: Your Honor, you have seen the accelerometer is inside a chip. So when it is inside a chip, because of external electrical signal, not only that, inside the circuit, because of the change of temperature, temperature change of vortex, there is impact on the acceleration.

So, for example, if the accelerometer is really high frequency, the impact of electrical signal, the changes in vortex, change in temperature makes changes in the acceleration.

THE COURT: When you say "noise," do you mean literal audible noise? Or is noise a term for interference?

DR. AHAMED: So noise can be represented by using a signal, a signal. So when noise is audible when -- within some frequency. Some noise we cannot see. But that's -- that's, you know, high frequency.

Case 0:14-cr-01855-RSP Document 67-10 Filed 03/29/18 Page 5 of 13 PageID #: 11

For example, our human ear can listen to between 20- to, you know, 20,000. But if it's beyond that, it cannot. But that's also noise, for example. Dog, they can hear. So here, the same thing. May have impact.

MR. LO: So, in other words, it's kind of like an inaccurate type of signal. So if it has a lot of noise, it may not run along the sign wave it's supposed to be. It may be more jagged, may create some more hiccups in the signal itself. And it's represented by electrical signals.

THE COURT: I guess what I'm getting at is, when we say "noise," are we talking about just plain old noise sound? Or is noise, you know, --

MR. LO: Right.

THE COURT: -- as we say, static?

MR. LO: Right, right. It's essentially like static, Your Honor.

THE COURT: Okay. So not literal noise.

MR. LO: Yes, not literal.

THE COURT: All right.

MR. LO: Likewise, the gyroscope has its own issues as well. It can create error through this concepts of drift and at low frequency.

I would also like to ask Dr. Ahamed to, kind of, explain what drift is and why there are errors at low frequency.

DR. AHAMED: Your Honor, for gyroscope, when it, you

know, rotates very fast, very fast, we don't see any drift. These are the changes of the position. If it is slow, we see that there is a division. Okay. So that division is called drift. So because of those external electrical signal changes in vortex, changes in temperature, that may be a drift.

So if a gyroscope rotates slowly, then there is a drift. But if it is really fast, then there's no drift.

MR. LO: Take, for example, the image on the right or the video on the right. You can see that one of the videos show it toppling over. And the other one is right side up.

And so it's a demonstration of if it's rotating at a quicker speed -- in other words a high frequency -- it is more accurate. It's less prone to, kind of, drifting off its original course. However, if it's a slow rotation, it's more prone to topple over and generate inaccurate data, essentially.

And so a good summary of both sensors is the accelerometer is good at reading at low frequencies. If it's slow, it's more prone to accurate measurements. A gyroscope, on the other hand, is if it moves fast, it's more prone to more accurate measurements.

On the other hand, if the accelerometer is moving at a fast pace, that's, again, that issue of noise or static. If the gyroscope is going at a slow speed, this introduces the issues of drift. There's a lot of errors within each individual sensor by themselves.

Case 2:14-cv-01135-RSP Document 67-19 Filed 03/29/18 Page 13 of 104

The third one is the magnetometer. The magnetometer also has its own issues. And I'd like to also direct Dr. Ahamed to explain what these interferences are and how it affects the magnetometer.

DR. AHAMED: So magnetometer, it points towards north. That's the magnetic field, the direction.

So now, in the vicinity if there is another magnet comes or there is electricity which also creates the magnetic field, and if you see in the picture because of that -- the new electric field, the magnetic field get distorted, which is on the right. So that way we won't be able to get the correct north because of those interference. So this way, you know, if it is something in the vicinity then clears this problem.

MR. LO: So the reason why we introduce the aspect of limitation of these motion sensors is because each motion sensor by itself has its own inaccuracies. And the ability to calculate orientation is subject to a lot of error based on these individual sensors.

So take, for example, if you were to have a compass. And if you have a compass, and you have some interference with it, like another magnet close to it, it pushes the magnet north a little bit off. There's this deviation.

Well, if you're traveling with this compass, say you're traveling from Los Angeles to San Francisco, you need to know where north is. But if the compass is pointed at a deviated

says, okay, I have a previous value that I'm looking at; and I know that there's some errors in it; I'm going to try to correct it.

So I'm going to step through each of these processes and explain what the previous state means -- the predicted state, the measured state, and the updated state.

What I want to explain is that this could be a recursive kind of algorithm. What you can do is you can take a previous known information, correct it at the current state, and then measure some other value. And then you would have an updated state to essentially correct the entire calculation and value.

And then this can be used to correct the next phase so that you don't have a recursive amount of errors. It won't be like the compass example.

Instead of traveling, you know, two hours with a bad signal, you can correct it after, you know, 30 seconds or a minute. It's kind of like a calibration in some ways.

And so I'm going to step through each of these states.

For example, take, for instance, a train on a track. And if you know where you are located initially, and you know a speed, and you know an amount of time you kind of know how far you, kind of, travel.

So take, for instance, if your train is traveling at potentially 70 miles an hour for one hour, you can predict and calculate that it potentially could be -- you've traveled

70 miles.

However, this actually can be subject to a lot of errors. Prime example is, in that hour you could have sped up or you could have slowed down. There could have been a lot of factors that make this value inaccurate. But it's a prediction; a guess of what your current state is.

The next value that you can utilize is what they call a measured state. A measured state can take a sensor reading. Take, for example, like a GPS and an antenna. Each of these can give you an approximate value. However, those may not be absolutely correct either. They are subject to interferences, radio signals, et cetera.

So this one may potentially give you a value of 68 miles. And now you have two values. You had a previous one that you said was 70 miles. This one says 68 miles.

And so what the updated state does is it takes both of these values and utilizes both of these two to correct it. And this would give you a new updated state.

In this case, it could be, you know, a ratio of it, an average of it. In this case, it was kind of like an average. And it's now updated to 69 miles. This may give you, actually, a more corrected or accurate value.

And so this -- this sensor fusion algorithm -- there's a different sensor fusion algorithm in the '438 patent. And it's quite specific. And so I would actually like Dr. Ahamed to,

kind of, explain a couple of the differences between the Kalman filter and the '438 patent.

DR. AHAMED: So, Your Honor, Kalman filter was invented, like, about 55 years ago. At that time, the concept was like, okay, we correct error. Based on a certain time you keep measuring and dynamically you get the value.

And in this patent you don't have to observe. Here you get value right away, right away calculate. That's one difference.

Second difference is that in Kalman filter mostly they use, kind of, weighted-average. You know, all the previous one, get an average. But here, in this particular patent, we use the angle of the velocity from the gyroscope. We use the accelerometer and get the updated value. So that's the really big difference.

Third big difference is that in Kalman filter, when you have measured state, here in measured state we -- they have used the value of gyroscope, accelerometer. Together you get the measured state. But in Kalman filter, you get whatever value you get. There's that one.

And fourth difference is that in Kalman filter every time it's updating using the comparison. Here, in this particular patent, both values of gyroscope, accelerometer, calculated value together is calculated that operated value. Those are the major differences from -- from the state of art.

MR. LO: And before we, kind of, get into the really, really nitty-gritty detail, I would just like to tell Your Honor that we're going to go over more in detail in the *Markman* hearing. I just want to introduce some of the concepts that are disclosed in the patent.

For example, the previous state, as required by the claim, it -- the updated state is based on this previous state. And it's associated with the first signal set.

So we can see here that in equation 1, we can utilize previous state represented by quaternions q0 to q3 on the right side of the equation.

The next aspect is the current state. And from the current state we utilize the angular velocities. And the patent terminology was "the first signal set and the previous state."

So what we can see here is the angular velocities in equation 1 are represented by the green box. And then the current state is represented by the quaternions on the left side of the equal sign. This is also represented by equation 5, where you can see the current state was represented by this equation called x of t based on t-1.

And we can get into more details as we go into the *Markman* hearing or *Markman* presentation, but it's, again, the calculated current state using the angular velocities and the previous state.

Next is a predicted measurement. And this predicted measurement, according to claim 1, is obtained based on the first signal set, without using any derivatives of the first signal set.

So, as we can see, equations 2, 3, 4 can represent the utilization of quaternions, which could be represented by the angular velocities and to generate an Ax, Ay, and Az, which would be a predicted measurement.

Likewise, the measured state includes a measurement of the second signal set, which is the axial acceleration and the predicted measurement, which is the one we had just spoken about right immediately before this one.

And, as you can see here, you can see that the current state is utilized represented by x of t based on t-1. And it's within a new function of h. And this gives you a measured state value. And the measured state value is this z of t, of t based on t minus 1.

And, again, we'll go into detail. If there's any other questions, feel free to obviously interrupt me.

And then, finally, we have the updated state. And the updated state is based on the previous state associated with the first signal set and a measured state associated with the second signal set. And, so, based on this flow chart, we see a current state and a measured state that, kind of, feed into the updated state.

THE COURT: All right. That makes sense.

MR. TETER: Thank you, Your Honor.

THE COURT: Thank you to both parties. The matter is submitted.

MR. CHAN: Thank you, Your Honor.

MR. LO: Thank you.

(At 3:20 p.m. the proceedings were adjourned.)

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CERTIFICATE OF REPORTER

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

DATE: Tuesday, July 28, 2015

Katherine Sullivan

Katherine Powell Sullivan, CSR #5812, RMR, CRR
U.S. Court Reporter